

# COAL MINING AND RECLAMATION PERMIT APPLICATION TO REVISE A PERMIT (ARP)

Issued To: AMERICAN ENERGY CORP

43521 Mayhugh Hill Rd.

Twp Hwy 88

Beallsville, OH 43716

Telephone: (740) 926-9152

**ARP Type:** 

Revise location of PFL soil piles

Permit Number: D-1159

**Application Number R-1159-10** 

Date: 09/14/2007

Effective: 09/14/2007

Expires: 01/25/2008

The issuance of this ARP means only that the application to conduct a coal mining operation meets the requirements of Chapter 1513 of the Revised Code, and as such DOES NOT RELIEVE the operator of any obligation to meet other federal, state or local requirements.

This ARP is issued in accordance with and subject to the provisions, conditions, and limitations of Chapter 1513 of the Revised Code and Chapters 1501:13-1, 1501:13-3 through 1501:13-14 of the Administrative Code.

The approved water monitoring plan for this ARP is:

Quality: N/A

Signature:

Quantity: N/A

Note: Any previous condition(s) imposed on this permit, or subsequent adjacent areas, also apply to

this ARP unless noted otherwise.

Chief, Mineral Resources Management

F100 Rev: 07/01/2001 OPERATOR

## OHIO DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINERAL RESOURCES MANAGEMENT

#### APPLICATION TO REVISE A COAL MINING PERMIT

Note: Refer to the division's "General Guidelines for Processing ARPs" and "Requirements for Specific Types of Common ARPs" for guidance on submitting and processing ARPs.

Applicant's Name American Energy Corporation
 Address 43521 Mayhugh Hill Road, Twp. Hwy. 88
 City Beallsville State OH Zip 43716
 Telephone Number 740-926-9152



DECEMBERAL RESOURCES MANAGEMENT

- 2. Permit Number D-1159
- 3. Section of mining and reclamation to be revised:

Part 2, Page 17, Item 2, Attachment 15 Part 3, Page 24, Item D(1)

4. Describe in detail the proposed revision and submit any necessary drawings, plans, maps, etc:

This proposed revision is a request to relocate the prime farmland area. See attached letter dated October 12, 2006 and accompanying information and map.

5. Describe in detail the reason for requesting the revision:

Coal waste was deposited on a portion of the prime farmland area mandating that it be relocated to provide the same acreage post-mining that existed premining.

6. Will this revision constitute a significant alteration from the mining and reclamation operations contemplated in the original permit? Yes, No.

(Note: refer to paragraph (E)(2) of 1501:13-04-06 of the Ohio Administrative Code to determine if a revision is deemed significant.)

If "yes," complete the following items 7 through 9.

7. In the space below, give the name and address of the newspaper in which the public notice is to be published.



Revised 03/06 DNR-744-9003 8. In the space below, give the text of the public notice that is to be published. (Include the information required by paragraph (A)(1) of 1501:13-05-01 of the Ohio Administrative Code.) 9. In the space below, give the name and address of the public office where this application is to be filed for public viewing. I, the undersigned, a responsible official of the applicant, do hereby verify the information contained in this revision request is true and correct to the best of my information and belief. Print Name RYAN M. MURRAY GENERAL MANAGER & SUPERINTENDENT Title Date 01/12/27 Signature Sworn before me and subscribed in my presence this / day of Notary Public, State of Ohio My Commission Expires . 4 Notary Public (For Division Use Only) This application for renewal is hereby issued, is disapproved. Chief. Division of Mineral Resources Management

October 12, 2006

## American Energy Corporation

Chief
Ohio Department of Natural Resources
Division of Mineral Resources Management
2045 Morse Rd., Bldg. H-3
Columbus, Ohio 6693

Re: Notice of Violation No. 21860

Dear Chief:

Please accept this letter as a response to the referenced NOV. Based on test pits and surveys performed by American Energy Corporation personnel it has been determined that adequate topsoil and subsoil exist on site to restore the PFL area. The following sequence of events will clarify what has occurred on the subject area:

- 1. Permit D-1159 (containing 11.2 acres of prime farmland) was issued on January 26, 1998.
- 2. The #12 coal seam was removed from portions of the area and coal waste was deposited in the #12 pit via an approved ARP.
- 3. The "A" horizon soil was removed from the PFL area and placed in topsoil piles and a small portion of the "B" soil was removed and placed in piles. The majority of the "B" soil remained in place as confirmed by the results of test pits included herein.
- 4. Portions of the PFL area are being used as a parking area and stone has been placed on the "B" soil.
- 5. Portions of the PFL area have equipment and structure temporarily stored on the "B" soil.
- 6. The PFL area will be relocated and reconstructed in the approximate location shown on the attached map when it is determined that all mining activities are completed in this area.
- 7. Extra care will be undertaken to minimize impacts to the "B" soil when the stone, equipment and structures are removed to insure that the "B" thickness will be restored to its premining condition.
- 8. The "A" soil will remain in the stockpile until the area is ready for reclamation. At the appropriate time, the relocated PFL area will be restored to the premining condition as specified in the original permit.
- Should any soil thickness deficiencies be encountered, additional soil is available on portions of
   425 or D-1159 to supplement what is available on site to insure that adequate PFL soil thickness is
   restored.
- 10. The PFL area was removed from the year six area previously reported to be reclaimed due to the reaffectment by equipment and material storage.

October 12, 2006 Page 2

> In summary, based on current on site conditions, the "A" horizon has been removed and is stored in piles. The majority of the "B" soil remains in place and will remain in that position until reclamation is undertaken on the area. During reclamation, the relocated PFL area will be staked and on site in place "B" soil will be utilized or if inadequate thickness, subsoil can be imported from other portions of D-1059 and D-425. The A horizon will then be placed on the B to insure that the proper thickness of A & B soil are restored.

> > Yours truly,

Fred M. Blumling

Fred M. Blumby

**Environmental Engineer** 

Enclosure: Soil Test Pit Cross Section (1 through 8) Soil Investigation Report Photos-Soil Test Pit Cross Section (1 through 8)

43521 Mayhugh Hill Road Twp.Hwy.88 Beallsville, Ohio 43716

Phone: (740) 926-9152 FAX: (740) 926-9138

# American Energy Corporation

July 25, 2007

Ms. Treva J. Knasel ODNR, Division of Mineral Resources Mgt. 2045 Morse Road, Bldg. H-3 Columbus, Ohio -43229-6693

Re: American Energy Corp ARP #R -1159-10

RECEIVED

JUL 2 2 2007

DIVISION OF MINERAL RESOURCES MANAGEMENT

Dear Ms. Knasel:

The following is submitted in response to your revision letter for the referenced project dated June 29, 2007.

The "A" horizon was removed and redistributed in selected areas when this area was originally reported to be reclaimed. Subsequently the area was "re-disturbed" and topsoil was removed from selected areas. As noted in the soil investigation narrative contained in the original ARP submittal, Test pits 1, 2, 3 and 8 were in original ground and had not been significantly disturbed by the original disturbance or had merely had parking lot stone applied on top of the "A" horizon.

Regardless of when and how the "A" horizon was removed, there is adequate topsoil and subsoil on site to reclaim the PFL area as required in the approved plan when this area is reported to be reclaimed.

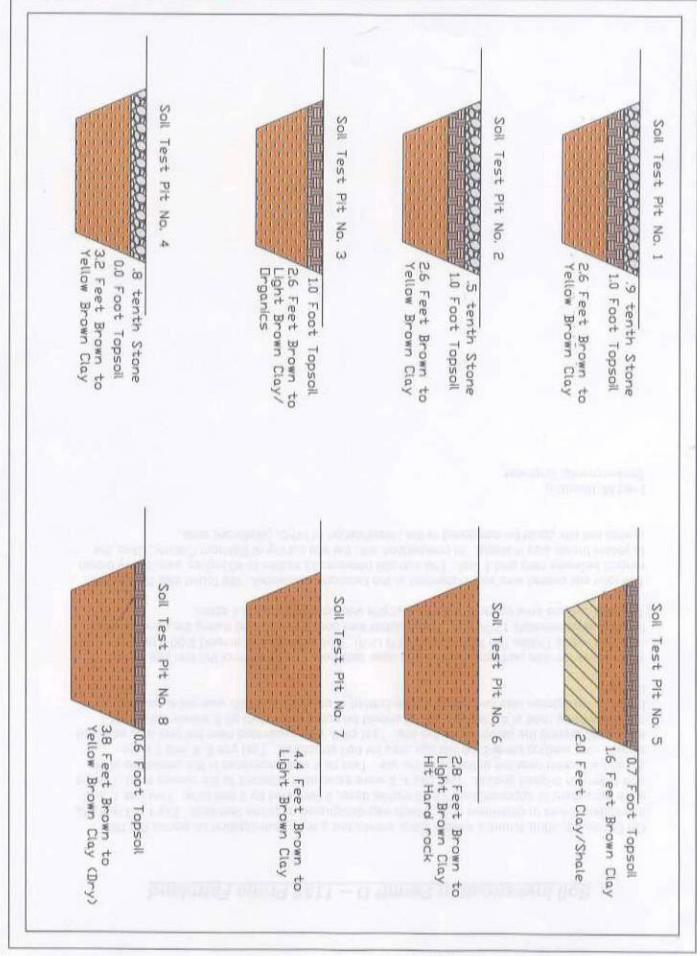
Yours truly,

American Energy Corp.

Fred M. Blumling

**Environmental Engineer** 

OPERATOR



#### Soil Investigation Permit D -- 1159 Prime Farmland

On October 3, 2006 America energy Corp. conducted a soil's investigation on permit D-1159. Investigation was to determine soils, which was designated as prime farmland. Eight soil test pits were excavated to approximately 42-48 inches deep, 2 feet wide by 5 feet long. Test pits 1, 2, 3, and 8 were in original ground. Test pits 1, 2 were excavated adjacent to the access road. Test pit 3 was excavated near the entrance to the site. Test pit 4 was excavated in the centerline of the access road leading toward the storage area for belt structures. Test pits 5, 6 and 7 were excavated around the perimeter of the site. Test pit 8, was excavated near the tree line, adjacent to the township road in natural ground. It should be noted that in test pit 6 shows 2.8 feet of brown to light brown clay and hitting a rock-bottom of sandstone, which was not excavated through.

The excavation was performed with a 580 case backhoe. The location of the test pits were obtained with a Thales Pro Mark three (GPS Unit). The work started around 9:00 a.m. and finished approximately 12:30 p.m. The weather was cool and overcast during the excavation. The total surface area covered with the test pits was approximately 6.4 acres.

The total soil overall was very consistent in the locations excavated. We found that the top soil ranged between zero and 1 foot. The sub soil between 32 inches to 40 inches was mainly brown to yellow brown clay material. In comparison with the soil survey of Belmont County, Ohio, the overall soil pits could be compared to the classification of WhB, (Wellston) soils.

Fred M. Blumling Environmental Engineer

LOCATION: Edge of Access Road

Prime Farmland Permit # 1159

Classification:

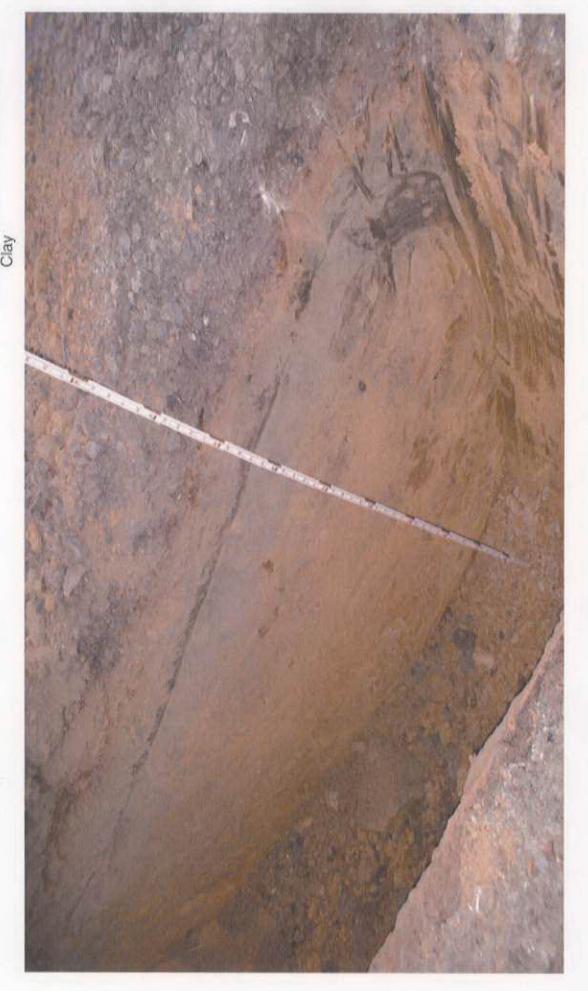


10089 AEC

LOCATION: Edge of Access Road

Prime Farmland Permit # 1159

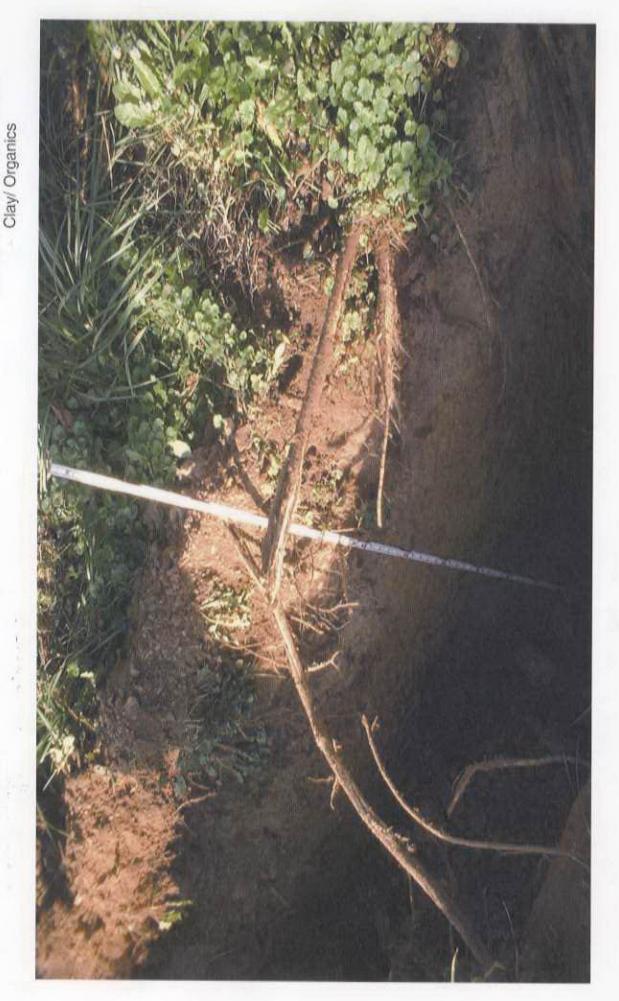
Classification: .5 tenth Stone
1.0 Foot Topsoil
3.0 Feet Brown to Yellow Brown
Clay



LOCATION: Edge of Access Road at entrance

Prime Farmland Permit # 1159

Classification: .0 tenth Stone
1.0 Foot Topsoil
3.0 Feet Brown to Light Brown

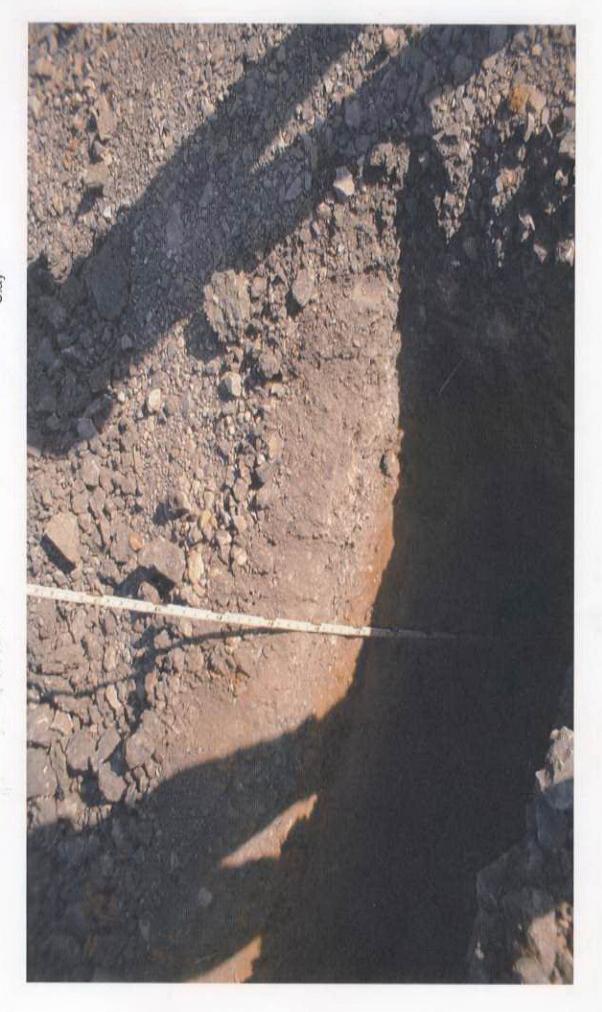


LOCATION: Access Rd For Belt Structure

Prime Farmland Permit # 1159

Classification:

.8 tenth Stone 0.0 Foot Topsoil 3.2 Feet Brown - Yellow Brown Clay



LOCATION: In Farmland Area Disturbed

Classification:

0.0 tenth Stone
0.7 Foot Topsoil
1.6 Feet Brown Clay
2.0 Feet Clay / Shale



Prime Farmland Permit # 1159

Classification:

. 0 tenth Stone

0 Foot Topsoil

2.8 Feet Brown to Light Brown Clay Hit hard Rock/



LOCATION: In Farmland Area

Prime Farmland Permit # 1159

Classification:

4.4 Feet Brown to Light Brown .0 tenth Stone 0..0 Foot Topsoil



LOCATION: In Farmland Area original ground

Prime Farmland Permit # 1159

Classification: . 0 tenth Stone 0.6 Foot Topsoil 3.8 Feet Brown toYellow Brown Clay (Dry)



 New Submittal
 Revised Submittal R-

### OHIO DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINERAL RESOURCES MANAGEMENT

#### **APPLICATION TO REVISE A COAL MINING PERMIT**

Note: Refer to the division's "General Guidelines for Processing ARPs" and "Requirements for Specific Types of Common ARPs" for guidance on submitting and processing ARPs.

1. Applicant's Name American Energy Corporation

Address 43521 Mayhugh Hill Road, Twp. Hwy. 88

City Beallsville State OH Zip 43716

Telephone Number 740-926-9152

- 2. Permit Number **D-1159**
- 3. Section of mining and reclamation to be revised:

Part 2, Page 17, Item 2, Attachment 15

**Part 3, Page 24, Item D(1)** 

4. Describe in detail the proposed revision and submit any necessary drawings, plans, maps, etc:

This proposed revision is a request to relocate the prime farmland area. See attached letter dated October 12, 2006 and accompanying information and map.

5. Describe in detail the reason for requesting the revision:

Coal waste was deposited on a portion of the prime farmland area mandating that it be relocated to provide the same acreage post-mining that existed premining.

6. Will this revision constitute a significant alteration from the mining and reclamation operations contemplated in the original permit? 

Yes, 
No.

(Note: refer to paragraph (F)(2) of 1501:13-04-06 of the Ohio Administrative Code to

(**Note:** refer to paragraph (E)(2) of 1501:13-04-06 of the Ohio Administrative Code to determine if a revision is deemed significant.)

If "yes," complete the following items 7 through 9.

7. In the space below, give the name and address of the newspaper in which the public notice is to be published.

Revised 03/06 DNR-744-9003

8.	In the space below, give the text of the public notice that is to be published. (Include the information required by paragraph (A)(1) of 1501:13-05-01 of the Ohio Administrative Code.)
9.	In the space below, give the name and address of the public office where this application is to be filed for public viewing.
	I, the undersigned, a responsible official of the applicant, do hereby verify the information contained in this revision request is true and correct to the best of my information and belief.
	Print Name RYAN M. MURRAY Title GENERAL MANAGER & SUBERINTENDENT
	Print Name RYAN M. MURRAY Title GENERAL MANAGER & SUPERINTENDENT Signature Date 01/12/27 :
	Sworn before me and subscribed in my presence this /2 day of a), 2007
	TENERAL BRAL  Estroy Veblo, State of Vide  No Constanting Expires, Video, 2010  Henerated in Mark & County  Notary Public
	(For Division Use Only)
This a	application for renewal is hereby 🗌 issued, 🔲 disapproved.
Chief	, Division of Mineral Resources Management Date

Mind 1154 mind fundant

43521 Mayhugh Hill Road Twp.Hwy.88 Beallsville, Ohio 43716

# American Energy Corporation

October 12, 2006

Chief Ohio Department of Natural Resources Division of Mineral Resources Management 2045 Morse Rd., Bldg. H-3 Columbus, Ohio 6693

Re: Notice of Violation No. 21860

Dear Chief:

Please accept this letter as a response to the referenced NOV. Based on test pits and surveys performed by American Energy Corporation personnel it has been determined that adequate topsoil and subsoil exist on site to restore the PFL area. The following sequence of events will clarify what has occurred on the subject area:

- 1. Permit D-1159 (containing 11.2 acres of prime farmland) was issued on January 26, 1998.
- 2. The #12 coal seam was removed from portions of the area and coal waste was deposited in the #12 pit via an approved ARP.
- 3. The "A" horizon soil was removed from the PFL area and placed in topsoil piles and a small portion of the "B" soil was removed and placed in piles. The majority of the "B" soil remained in place as confirmed by the results of test pits included herein.
- 4. Portions of the PFL area are being used as a parking area and stone has been placed on the "B" soil.
- 5. Portions of the PFL area have equipment and structure temporarily stored on the "B" soil.
- 6. The PFL area will be relocated and reconstructed in the approximate location shown on the attached map when it is determined that all mining activities are completed in this area.
- 7. Extra care will be undertaken to minimize impacts to the "B" soil when the stone, equipment and structures are removed to insure that the "B" thickness will be restored to its premining condition.
- 8. The "A" soil will remain in the stockpile until the area is ready for reclamation. At the appropriate time, the relocated PFL area will be restored to the premining condition as specified in the original permit.
- Should any soil thickness deficiencies be encountered, additional soil is available on portions of
   425 or D-1159 to supplement what is available on site to insure that adequate PFL soil thickness is
   restored.
- 10. The PFL area was removed from the year six area previously reported to be reclaimed due to the reaffectment by equipment and material storage.

October 12, 2006 Page 2

In summary, based on current on site conditions, the "A" horizon has been removed and is stored in piles. The majority of the "B" soil remains in place and will remain in that position until reclamation is undertaken on the area. During reclamation, the relocated PFL area will be staked and on site in place "B" soil will be utilized or if inadequate thickness, subsoil can be imported from other portions of D-1059 and D-425. The A horizon will then be placed on the B to insure that the proper thickness of A & B soil are restored.

Yours truly,

Fred M. Blumling

Environmental Engineer

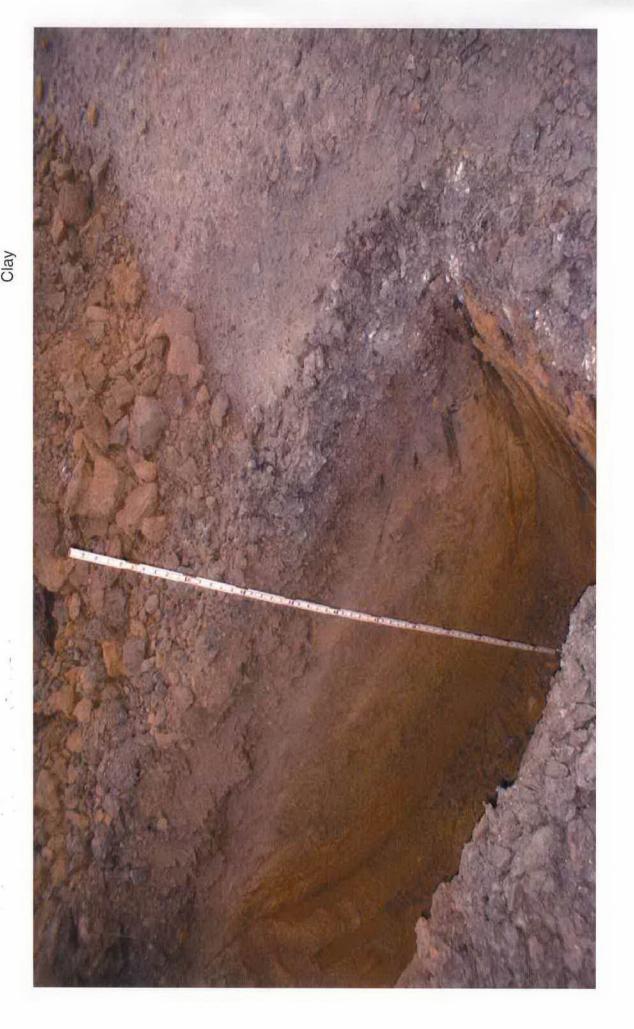
Enclosure:
Soil Test Pit Cross Section (1 through 8)
Soil Investigation Report
Photos-Soil Test Pit Cross Section (1 through 8)

LOCATION: Edge of Access Road

Prime Farmland Permit # 1159

Classification:

.9 tenth Stone 1.0 Foot Topsoil 2.6 Feet Brown to Yellow Brown Clay

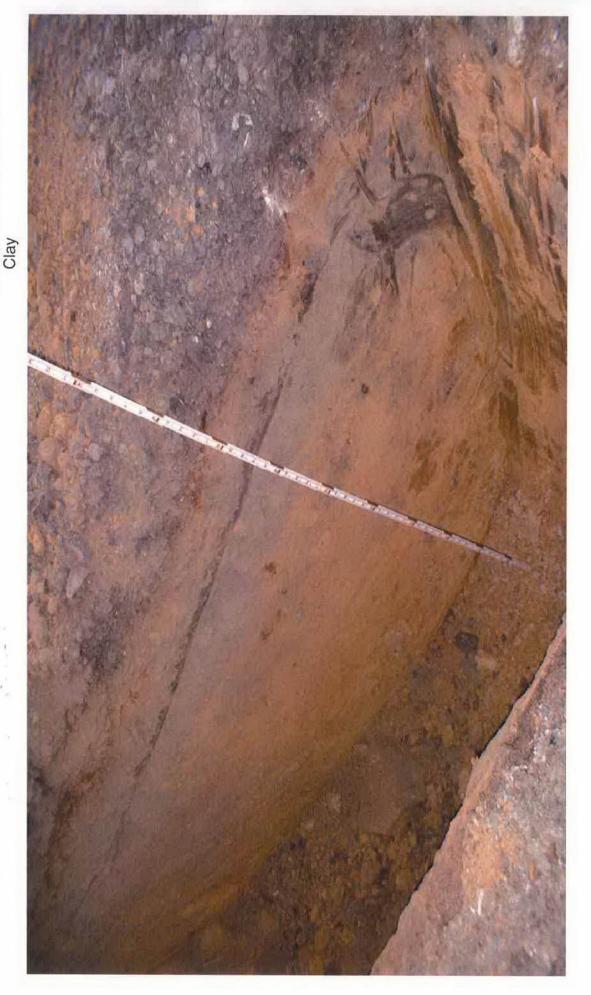


LOCATION: Edge of Access Road

Prime Farmland Permit # 1159

Classification:

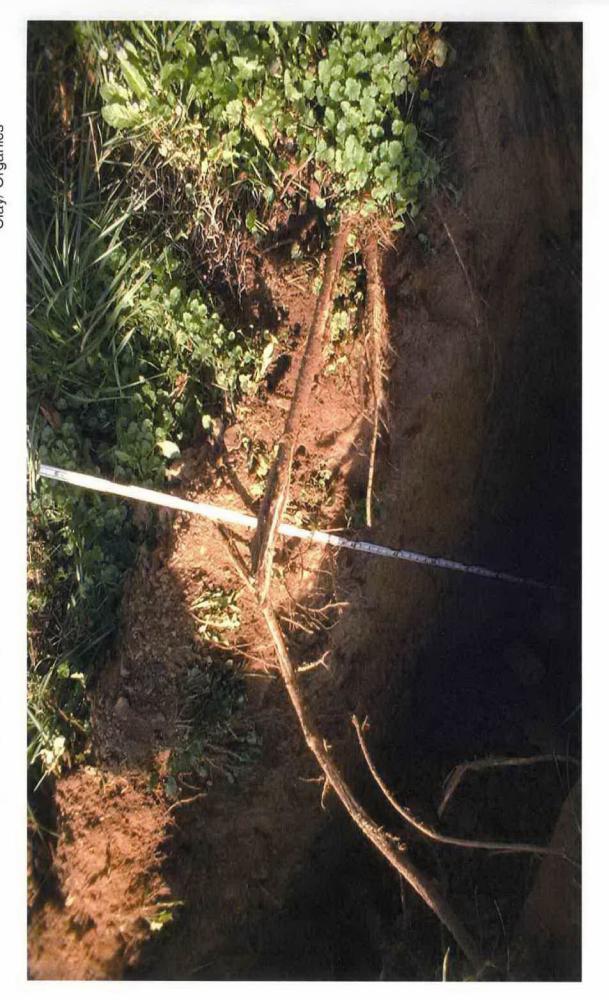
.5 tenth Stone 1.0 Foot Topsoil 3.0 Feet Brown to Yellow Brown Clay



LOCATION: Edge of Access Road at entrance

Prime Farmland Permit # 1159

Classification: .0 tenth Stone
1.0 Foot Topsoil
3.0 Feet Brown to Light Brown
Clay/ Organics

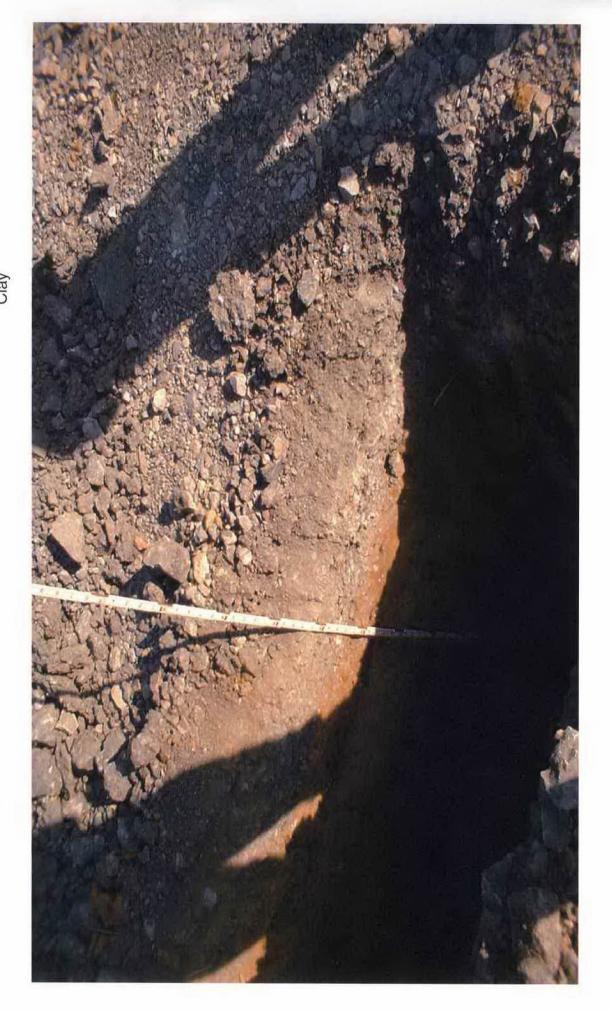


LOCATION: Access Rd For Belt Structure

Prime Farmland Permit # 1159

Classification: .8

.8 tenth Stone
0.0 Foot Topsoil
3.2 Feet Brown - Yellow Brown
Clay



LOCATION: In Farmland Area Disturbed

Classification:

0.0 tenth Stone
0.7 Foot Topsoil
1.6 Feet Brown Clay
2.0 Feet Clay / Shale



LOCATION: In Farmland Area

Prime Farmland Permit # 1159

Classification:

. 0 tenth Stone

0 Foot Topsoil

2.8 Feet Brown to Light Brown Clay Hit hard Rock/



LOCATION: In Farmland Area

Prime Farmland Permit # 1159

Classification:

ion: .0 tenth Stone 0..0 Foot Topsoil 4.4 Feet Brown to Light Brown

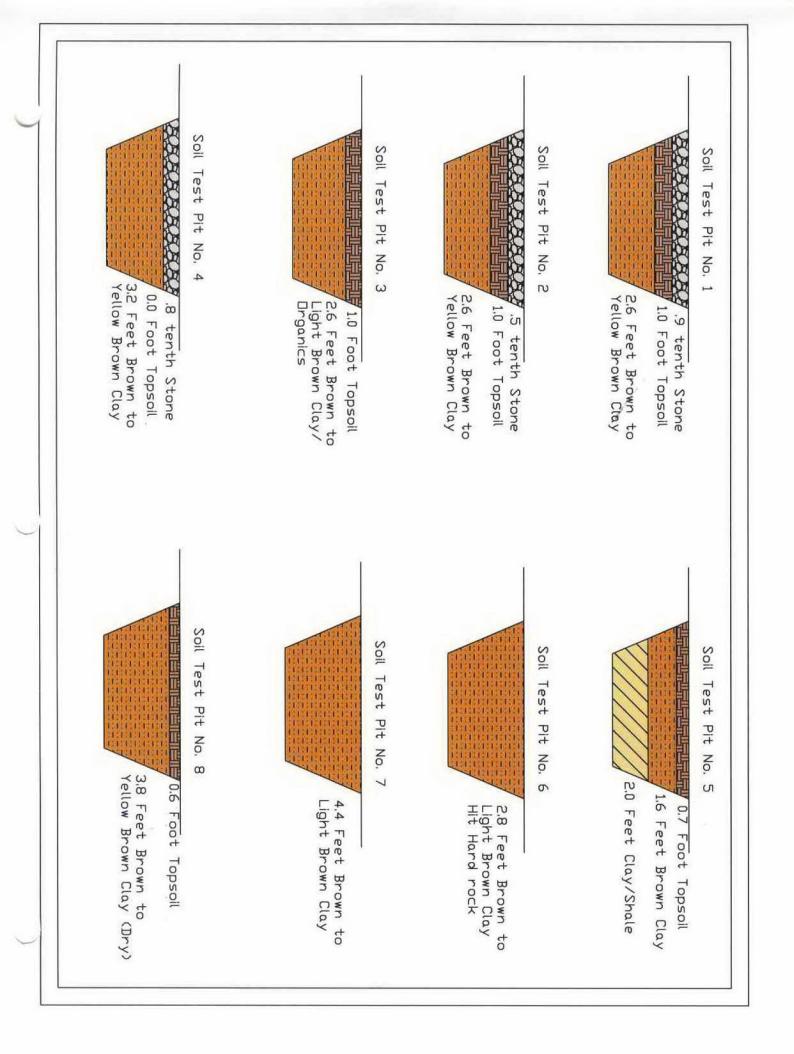


LOCATION: In Farmland Area original ground

Prime Farmland Permit # 1159

Classification: . 0 tenth Stone
0.6 Foot Topsoil
3.8 Feet Brown toYellow Brown
Clay (Dry)





October 11, 2006

Chief
Ohio Department of Natural Resources
Division of Mineral Resources Management
2045 Morse Rd., Bldg. H-3
Columbus, Ohio 6693

Re: Notice of Violation No. 21860

#### Dear Chief:

Please accept this letter as a response to the referenced NOV. Based on test pits and surveys performed by American Energy Corporation personnel it has been determined that adequate topsoil and subsoil exist on site to restore the PFL area. The following sequence of events will clarify what has occurred on the subject area:

- 1. Permit D-1159 (containing 11.2 acres of prime farmland) was issued on January 26, 1998.
- 2. The #12 coal seam was removed from portions of the area and coal waste was deposited in the #12 pit via an approved ARP.
- 3. The "A" horizon soil was removed from the PFL area and placed in topsoil piles and a small portion of the "B" soil was removed and placed in piles. The majority of the "B" soil remained in place as confirmed by the results of test pits included herein.
- 4. Portions of the PFL area are being used as a parking area and stone has been placed on the "B" soil.
- 5. Portions of the PFL area have equipment and structure temporarily stored on the "B" soil.
- 6. The PFL area will be relocated and reconstructed in the approximate location shown on the attached map when it is determined that all mining activities are completed in this area.
- 7. Extra care will be undertaken to minimize impacts to the "B" soil when the stone, equipment and structures are removed to insure that the "B" thickness will be restored to its premining condition.
- 8. The "A" soil will remain in the stockpile until the area is ready for reclamation. At the appropriate time, the relocated PFL area will be restored to the premining condition as specified in the original permit.

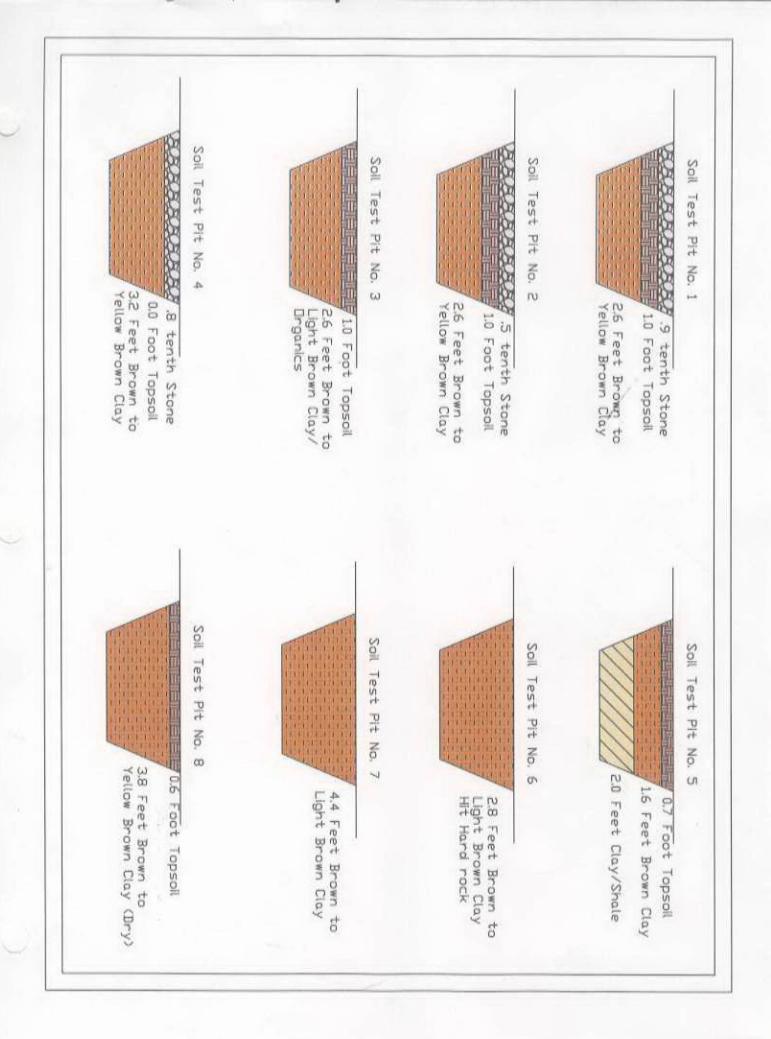
- 9. Should any soil thickness deficiencies be encountered, additional soil is available on portions of D-425 or D-1159 to supplement what is available on site to insure that adequate PFL soil thickness is restored.
- 10. The PFL area was removed from the year six area previously reported to be reclaimed due to the reaffectment by equipment and material storage.

In summary, based on current on site conditions, the "A" horizon has been removed and is stored in piles. The majority of the "B" soil remains in place and will remain in that position until reclamation is undertaken on the area. During reclamation, the relocated PFL area will be staked and on site in place "B" soil will be utilized or if inadequate thickness, subsoil can be imported from other portions of D-1059 and D-425. The A horizon will then be placed on the B to insure that the proper thickness of A & B soil are restored.

Yours truly,

Fred M. Blumling Environmental Engineer

Enclosure:
Soil Test Pit Cross Section (1 through 8)
Soil Investigation Report
Photos-Soil Test Pit Cross Section (1 through 8)



#### Soil Investigation Permit D -- 1159 Prime Farmland

On October 3, 2006 America energy Corp. conducted a soil's investigation on permit D-1159. Investigation was to determine soils, which was designated as prime farmland. Eight soil test pits were excavated to approximately 42-48 inches deep, 2 feet wide by 5 feet long. Test pits 1, 2, 3, and 8 were in original ground. Test pits 1, 2 were excavated adjacent to the access road. Test pit 3 was excavated near the entrance to the site. Test pit 4 was excavated in the centerline of the access road leading toward the storage area for belt structures. Test pits 5, 6 and 7 were excavated around the perimeter of the site. Test pit 8, was excavated near the tree line, adjacent to the township road in natural ground. It should be noted that in test pit 6 shows 2.8 feet of brown to light brown clay and hitting a rock-bottom of sandstone, which was not excavated through.

The excavation was performed with a 580 case backhoe. The location of the test pits were obtained with a Thales Pro Mark three (GPS Unit). The work started around 9:00 a.m. and finished approximately 12:30 p.m. The weather was cool and overcast during the excavation. The total surface area covered with the test pits was approximately 6.4 acres.

The total soil overall was very consistent in the locations excavated. We found that the top soil ranged between zero and 1 foot. The sub soil between 32 inches to 40 inches was mainly brown to yellow brown clay material. In comparison with the soil survey of Belmont County, Ohio, the overall soil pits could be compared to the classification of WhB, (Wellston) soils.

Fred M. Blumling Environmental Engineer

_X_	_ New Submittal	
	Revised Submittal R-	

### OHIO DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINES AND RECLAMATION

#### APPLICATION TO REVISE A COAL MINING PERMIT

Note: Refer to the Division's "General Guidelines for Processing ARPs" and "Requirements for Specific Types of Common ARPs" for guidance on submitting and processing ARPs.

эрс 1.	Applicant's Name AMERICAN ENERGY CORPORATION
	Address 43521 MAYHUGH HILL ROAD
	City BEALLSVILLE State OHIO Zip 43716
	Telephone No. <u>740 - 926 - 9152</u>
2.	Permit No. <u>D-1159</u> .
3.	Section of mining and reclamation plan to be revised:
	PART 2, PAGE 17, ITEM 2, ATTACHMENT 15, ITEM 4
4.	Describe in detail the proposed revision and submit any necessary drawings, plans, maps, etc.:
	THIS PROPOSED REVISION IS TO CHANGE THE THICKNESS OF "A" HORIZON MATERIAL TO BE REPLACED FROM 12 (TWELVE) INCHES TO 7 (SEVEN) INCHES. SEE ATTACHED ADDENDUM TO ATTACHMENT 15, ITEM 1 AND ADDENDUM TO ATTACHMENT 15, ITEM 4 OF THE ORIGINAL PERMIT.
5.	Describe in detail the reason for requesting the revision:
	THE TWELVE INCHES SPECIFIED IN THE APPROVED PERMIT IS IN ERROR. THE WhB SOIL IS LISTED AS ABOUT 7 INCHES THICK ON THE NRCS REPORTS CONTAINED IN THE PERMIT AND OBVIOUSLY 12 INCHES CANNOT BE REPLACED WHEN THERE WAS ONLY 7 ORIGINALLY.
6.	Will this revision constitute a significant alteration from the mining and reclamation operations contemplated in the original permit? Yes,X _No. (Note: refer to paragraph (E) (2) of 1501: 13-4-06 of the Ohio Administrative Code to determine if a revision is deemed significant.)
	If "yes", complete the following items 7 through 9.

8.	N/A In the space below give the text of	
	In the space below give the text of	
		the public notice that is to be published. (Include the ph (A) (1) of 1501: 13-05-01 of the Ohio Administrative
	N/A	
	In the space below give the name able filed for public viewing.	and address of the public office where this application is to
	N/A	
		ficial of the applicant, do hereby verify the information true and correct to the best of my knowledge and belief.
	Robert D. Moore	
	The Ivame	Date
<del></del>	met Media	President
Si	gnature	Title
Sv	vorn before me and subscribed in	my presence this 18th day of Movember 20 02
ARIAL	BARBARA L. RUSH	basbasa & Dust
75 01	NOTEDY PUBLIC, STATE OF OHIO MY CUMMISSION EXPIRES 9-01-04	Notary Public
	FO	R DIVISION USE ONLY
	FO	R DIVISION USE ONLI
This re	quest is hereby	
<del></del>	100 <sub>300 3</sub> 1	
Chief,	Division of Mines and Reclamation	n Date

ADDENDUM TO ATTACHMENT 15, ITEM 1, BENNOC, INC.

s ., e ....

# PRIME FARMLAND DESCRIPTION {Original undisturbed soil profile}

### WmB-- Westmoreland silt loam, 3 to 8 percent slopes.

This soil has a brown, friable silt loam surface layer {A Horizon} about & inches thick. The subsoil {B Horizon} is about 27 inches thick. The upper 20 inches is brown and dark yellowish brown, friable silt loam and firm clay loam. The lower 7 inches is yellowish brown, firm channery clay loam.

## PRIME FARMLAND DESCRIPTION (Original undisturbed soil profile)

#### WhB -- Wellston silt loam, 3 to 8 percent slopes.

This soil has a brown friable silt loam surface layer (A Horizon) about 7 inches thick. The subsoil (B Horizon) is about 40 inches thick. The upper 20 inches is brown, friable silt loam. The lower 20 inches is yellowish brown and strong brown firm loam. Weathered siltstone bedrock is about 59 inches.

### PRIME FARMLAND DESCRIPTION (Original undisturbed soil profile)

#### WkB -- Westmore silt loam, 3 to 8 percent slopes.

This soil has brown, friable silt loam surface layer (A Horizon) about 8 inches thick. The subsoil (B Horizon) is about 33 inches thick. The upper 17 inches is yellowish brown, friable silt loam and silty clay loam. The lower 16 inches is olive brown, mottled, firm clay. Weathered shale bedrock is at about 50 inches.

ADDENDUM TO ATTACHMENT 15, ITEM 4, BENNOC, INC.

#### SOIL RECONSTRUCTION

DURING BACKFILLING OPERATIONS WHEN THE AREA IS NEARLY READY FOR GRADING, THE SURVEY CREW WILL STAKE AN AREA OF EQUAL SIZE TO THE ORIGINAL PRIME FARMLAND UNITS, UTILIZING THE SAME EQUIPMENT AS FOR REMOVAL OPERATIONS THE FOREMAN WILL REPLACE THE STOCKPILED HORIZONS IN THEIR PROPER SEQUENCE AND DEPTHS TO REESTABLISH THE PRIME FARMLAND ACREAGE. TRAVEL ACROSS THE PILES WILL BE LIMITED TO THAT WHICH IS ABSOLUTELY NECESSARY DURING REPLACEMENT OF THE SOILS. WORK ON REPLACEMENT OF PRIME FARMLAND SOIL WILL OCCUR WITHIN SOIL MOISTURE AND TEMPERATURE RANGES THAT WILL MINIMIZE COMPACTION. IF THE MOISTURE CONTENT OF THE SOIL IS SUCH THAT IT GLISTENS OR FORMS A COHESIVE BALL OR RIBBON WHEN ROLLED BETWEEN THE THUMB AND FOREFINGERS IT IS TOO MOIST FOR WORKING.

THE MINIMUM DEPTH OF SOIL AND SOIL MATERIAL TO BE RECONSTRUCTED FOR PRIME FARMLAND SHALL BE FORTY-EIGHT INCHES.

THE MATERIAL FROM "B", OR "B" AND "C", WILL FIRST BE REPLACED IN SUCH A MANNER AS TO AVOID EXCESS COMPACTION OF OVERBURDEN AT A UNIFORM THICKNESS NOT LESS THAN FORTY-EIGHT INCHES.

THE MATERIAL FROM THE "A" HORIZON WILL BE REPLACED ON TOP THE "B" AT A UNIFORM THICKNESS NOT LESS THAN **SEVEN** INCHES. THIS THICKNESS RESTORATION, COMBINED WITH THE INSTALLATION OF PROPER ARTIFICIAL DRAINAGE, FERTILIZER AND LIME APPLICATION AS DETERMINED BY LABORATORY ANALYSIS AND PROPER MANAGEMENT PRACTICES WILL CREATE A FINAL SOIL HAVING AN EQUAL OR GREATER PRODUCTIVE CAPACITY THAN EXISTED IN THE SOIL BEFORE MINING .

BY SEPARATELY REMOVING, STOCKPILING AND REPLACING THE "A" AND "B" HORIZONS THE TEXTURE OF THE REPLACED SOILS WILL BE WITHIN THE RANGES OF THE UNMINED SOILS. THE REACTION OF THE REPLACED SOILS WILL BE WITHIN THE RANGES OF THE UNMINED SOILS BY TAKING SOIL TEST TO DETERMINE THE LIME RATES TO BE APPLIED TO THE REPLACED SOIL.

EXISTING ARTIFICIAL DRAINAGE WILL BE RE-ESTABLISHED SUBSEQUENT TO MINING. DRAINAGE IMPROVEMENTS WILL BE EQUIVALENT TO WHAT EXISTED PRIOR TO MINING.

THE PRIME FARMLAND SOIL AREA WILL BE RESTORED TO ALLOW FOR POSITIVE SURFACE DRAINAGE AFTER FINAL SETTLING OCCURS. THE RECONSTRUCTED SOIL WILL HAVE AN AVERAGE SLOPE PERCENTAGE WITHIN THE SLOPE RANGE OF THE UNMINED PRIME FARMLAND MAP UNIT.

IN ORDER TO REDUCE COMPACTION EFFECTS WHICH MAY HAVE OCCURRED DURING THE REPLACEMENT OPERATIONS, ADDITIONAL CONDITIONING OF THE "A" AND "B" HORIZON SOILS IS UNDERTAKEN. A SUBSOILER IS USED TO LOOSEN THE SOILS. THE SUBSOILER IS PULLED BY A DUAL-TIRED AGRICULTURAL TRACTOR. THE "A" HORIZON SOILS ARE CONDITIONED AFTER REPLACEMENT BY NORMAL AGRICULTURAL SEED BED PREPARATION. POROSITY OF THE SOILS AFTER RECONDITIONING SHALL PERMIT PENETRATION OF ROOTS.

SEEDING, MULCHING AND OTHER EROSION CONTROL MEASURES SHALL BE COMPLETED AS SOON AS WEATHER CONDITIONS PERMIT AFTER REPLACEMENT OF TOPSOIL. SEE ADDENDUM TO ATTACHMENT 15, ITEM 4, SOIL REVEGETATION.

